

## Swivel-Head Wood Lathe MODEL G0584 INSTRUCTION MANUAL



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# WARNING

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- Lead from lead-based paints.
- Crystalline silica from bricks, cement, and other masonry products.
- Arsenic and chromium from chemically treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

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### INTRODUCTION

#### **Foreword**

We are proud to offer the Model G0584 Swivel-Head Wood Lathe. This machine is part of a growing Grizzly family of fine woodworking machinery. When used according to the guidelines set forth in this manual, you can expect years of trouble-free, enjoyable operation and proof of Grizzly's commitment to customer satisfaction.

We are pleased to provide this manual with the Model G0584. It was written to guide you through assembly, review safety considerations, and cover general operating procedures. It represents our effort to produce the best documentation possible.

The specifications, drawings, and photographs illustrated in this manual represent the Model G0584 as supplied when the manual was prepared. However, owing to Grizzly's policy of continuous improvement, changes may be made at any time with no obligation on the part of Grizzly. For your convenience, we always keep current Grizzly manuals available on our website at <a href="https://www.grizzly.com">www.grizzly.com</a>. Any updates to your machine will be reflected in these manuals as soon as they are complete. Visit our site often to check for the latest updates to this manual!



#### **Contact Info**

If you have any comments regarding this manual, please write to us at the address below:

Grizzly Industrial, Inc.

c/o Technical Documentation
P.O. Box 2069

Bellingham, WA 98227-2069

We stand behind our machines. If you have any service questions or parts requests, please call or write us at the location listed below.

Grizzly Industrial, Inc.
1203 Lycoming Mall Circle
Muncy, PA 17756
Phone: (570) 546-9663
Fax: (800) 438-5901
E-Mail: techsupport@grizzly.com



Web Site: http://www.grizzly.com



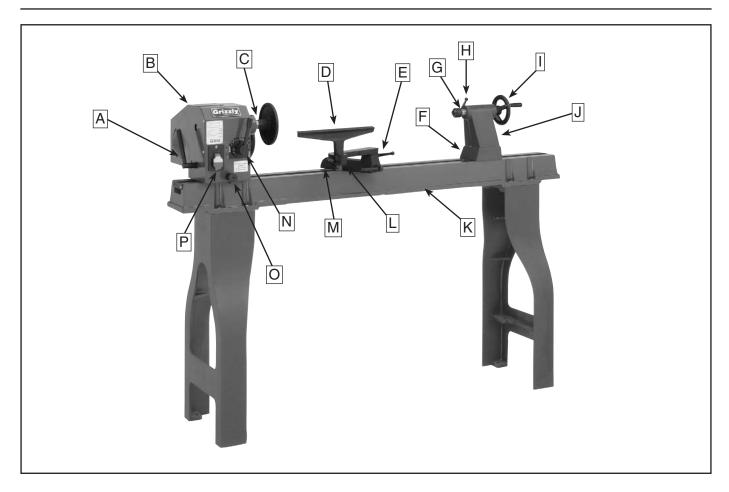
# **SHEET**

Customer Service #: (570) 546-9663 • To Order Call: (800) 523-4777 • Fax #: (800) 438-5901

#### **MODEL G0584 SWIVEL-HEAD WOOD LATHE**

Design Type:	Floor Model
Overall Dimensions:	
Including Stand	62"L x 14½"D x 45½"H
	42½"
	54" x 13 <sup>3</sup> / <sub>4</sub> "
	13"W x 16"H x 63½"L
	14½"W x 9½"H x 32"L
Total Shipping Weight	300 lbs.
Machine Weight	282 lbs.
Specifications:	
Swing Over Bed	14"
Distance Between Centers	43"
Spindle Size	1" x 12 TPI RH
Spindle Bore Size	3/8"
Spindle Taper	MT#2
	MT#2
·	10 Speeds: 600-2400 RPM
· ·	0°, 60°, 90°, 120°, 180°
Construction:	
	Precision Ground Cast Iron
	Cast Iron
·	Shielded and Lubricated Ball Bearings
	Cast Iron
Main Motor:	TEEO O O
	TEFC Capacitor Start Induction
	34HP
•	110V
-	Single / 60 Hz
•	9 Amps
	Shielded and Lubricated Ball Bearings
•	Shielded and Lubricated Ball Bearings
Switch	Paddle Type w/Lockout Key

### Identification



- A. Headstock Quick Release Lever
- B. Headstock
- C. Spindle
- D. Tool Rest
- E. Tool Rest Base Lock
- F. Tailstock Base Lock
- G. Quill
- H. Quill Lock

- I. Quill Handwheel
- J. Tailstock
- K. Bed
- L. Tool Rest Lock
- M. Tool Rest Arm Lock
- N. Speed Change Lever
- O. Swivel Adjustment Pin
- P. ON/OFF Switch w/Lockout Key



### **SECTION 1: SAFETY**

#### **AWARNING**

### For Your Own Safety, Read Instruction **Manual Before Operating this Machine**

The purpose of safety symbols is to attract your attention to possible hazardous conditions. This manual uses a series of symbols and signal words which are intended to convey the level of importance of the safety messages. The progression of symbols is described below. Remember that safety messages by themselves do not eliminate danger and are not a substitute for proper accident prevention measures.



Indicates an imminently hazardous situation which, if not avoided, POANGER Indicates an infinite tity hazardous six WILL result in death or serious injury.

**AWARNING** Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

**A**CAUTION

Indicates a potentially hazardous situation which, if not avoided, MAY result in minor or moderate injury. It may also be used to alert against unsafe practices.

NOTICE

This symbol is used to alert the user to useful information about proper operation of the machine.

### **AWARNING** Safety Instructions for Machinery

- 1. READ THROUGH THE ENTIRE MANUAL BEFORE STARTING MACHINERY. Machinery presents serious injury hazards to untrained users.
- 2. ALWAYS USE ANSI APPROVED SAFETY GLASSES WHEN OPERATING MACHINERY. Everyday eyeglasses only have impact resistant lenses, they are NOT safety glasses.
- 3. ALWAYS WEAR AN ANSI APPROVED RESPIRATOR WHEN **OPERATING** MACHINERY THAT PRODUCES DUST. Wood dust is a carcinogen and can cause cancer and severe respiratory illnesses.

- 4. ALWAYS USE HEARING PROTECTION WHEN **OPERATING** MACHINERY. Machinery noise can cause permanent hearing damage.
- 5. WEAR PROPER APPAREL. DO NOT wear loose clothing, gloves, neckties, rings, or jewelry which may get caught in moving parts. Wear protective hair covering to contain long hair and wear non-slip footwear.
- 6. NEVER OPERATE MACHINERY WHEN TIRED, OR UNDER THE INFLUENCE OF DRUGS OR ALCOHOL. Be mentally alert at all times when running machinery.

# **AWARNING**Safety Instructions for Machinery

- ONLY ALLOW TRAINED AND PROP-ERLY SUPERVISED PERSONNEL TO OPERATE MACHINERY. Make sure operation instructions are safe and clearly understood.
- KEEP CHILDREN AND VISITORS AWAY.
   Keep all children and visitors a safe distance from the work area.
- MAKE WORKSHOP CHILD PROOF. Use padlocks, master switches, and remove start switch keys.
- 10. NEVER LEAVE WHEN MACHINE IS RUNNING. Turn power OFF and allow all moving parts to come to a complete stop before leaving machine unattended.
- **11. DO NOT USE IN DANGEROUS ENVIRONMENTS.** DO NOT use machinery in damp, wet locations, or where any flammable or noxious fumes may exist.
- 12. KEEP WORK AREA CLEAN AND WELL LIT. Clutter and dark shadows may cause accidents.
- 13. USE A GROUNDED EXTENSION CORD RATED FOR THE MACHINE AMPERAGE. Undersized cords overheat and lose power. Replace extension cords if they become damaged. DO NOT use extension cords for 220V machinery.
- 14. ALWAYS DISCONNECT FROM POWER SOURCE BEFORE SERVICING MACHINERY. Make sure switch is in OFF position before reconnecting.
- 15. MAINTAIN MACHINERY WITH CARE. Keep blades sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.

- 16. MAKE SURE GUARDS ARE IN PLACE AND WORK CORRECTLY BEFORE USING MACHINERY.
- 17. REMOVE ADJUSTING KEYS AND WRENCHES. Make a habit of checking for keys and adjusting wrenches before turning machinery ON.
- 18. CHECK FOR DAMAGED PARTS BEFORE USING MACHINERY. Check for binding and alignment of parts, broken parts, part mounting, loose bolts, and any other conditions that may affect machine operation. Repair or replace damaged parts.
- 19. USE RECOMMENDED ACCESSORIES. Refer to the instruction manual for recommended accessories. The use of improper accessories may cause risk of injury.
- **20. DO NOT FORCE MACHINERY.** Work at the speed for which the machine or accessory was designed.
- 21. SECURE WORKPIECE. Use clamps or a vise to hold the workpiece when practical. A secured workpiece protects your hands and frees both hands to operate the machine.
- **22. DO NOT OVERREACH.** Keep proper footing and balance at all times.
- 23. MANY MACHINES WILL EJECT THE WORKPIECETOWARDTHEOPERATOR. Know and avoid conditions that cause the workpiece to "kickback."
- 24. ALWAYS LOCK MOBILE BASES (IF USED) BEFORE OPERATING MACHINERY.

# **A**WARNING Additional Safety for Wood Lathes

- KEEPING GUARDS IN PLACE. Make sure all guards are in place and that the lathe sits on a flat, stable surface.
- 2. **EYE/FACE PROTECTION.** Always wear eye protection or a face shield when operating the lathe.
- 3. RESPIRATORY PROTECTION. Always wear a respirator when using this machine. Wood dust may cause allergies or long-term respiratory health problems.
- 4. MOUNTING WORKPIECE. Before starting, be certain the workpiece has been properly embedded on the headstock and tailstock centers and that there is adequate clearance for the full rotation.
- ADJUSTING TOOL REST. Adjust tool rest to provide proper support for the turning tool you will be using. Test tool rest clearance by rotating workpiece by hand before turning lathe ON.
- 6. TURNING SPEED. Select the turning speed which is appropriate for the type of work. Allow the lathe to gain its full speed before using.
- 7. WORKPIECE CONDITION. Always inspect the condition of your workpiece. DO NOT turn pieces with knots, splits, and other potentially dangerous conditions. Make sure joints of glued-up pieces have high quality bonds and won't fly apart during operation.

- **8. USING SHARP CHISELS.** Keep lathe chisels properly sharpened and hold firmly in the proper position when turning.
- OPERATING DAMAGED LATHE. Never operate the lathe with damaged or worn parts.
- 10. ADJUSTMENTS/MAINTENANCE. Make sure your wood lathe is turned OFF, disconnected from its power source, and all moving parts have come to a complete stop before starting any inspection, adjustment, or maintenance procedure.
- 11. STOPPING LATHE. DO NOT stop the lathe by using your hand against the workpiece. Allow the lathe to stop on its own.
- **12. AVOIDING ENTANGLEMENT.** Keep long hair and loose clothing articles such as sleeves, belts, and jewelry items away from the lathe spindle.
- **13. FACEPLATE TURNING.** When faceplate turning, use lathe chisels on the downward spinning side of the workpiece only.
- **14. SANDING/POLISHING.** Remove the tool rest when performing sanding or polishing operations on the rotating spindle.
- **15. MATERIAL REMOVAL RATE.** Attempting to remove too much material at once may cause workpiece to fly out of the lathe.

#### WARNING

Like all machines there is danger associated with the Model G0584. Accidents are frequently caused by lack of familiarity or failure to pay attention. Use this machine with respect and caution to lessen the possibility of operator injury. If normal safety precautions are overlooked or ignored, serious personal injury may occur.

### **A**CAUTION

No list of safety guidelines can be complete. Every shop environment is different. Always consider safety first, as it applies to your individual working conditions. Use this and other machinery with caution and respect. Failure to do so could result in serious personal injury, damage to equipment, or poor work results.

### **SECTION 2: CIRCUIT REQUIREMENTS**

#### 110V Operation

### **AWARNING**

Serious personal injury could occur if you connect the machine to the power source before you have completed the set up process. DO NOT connect the machine to the power source until instructed to do so.

#### **Amperage Draw**

The <sup>3</sup>/<sub>4</sub> HP motor on the Model G0584 will draw the following amps:

Motor Load ......9 Amps

#### **Circuit Breaker Requirements**

Install your machine on a dedicated circuit to reduce the possibility of tripping the circuit breaker. If the circuit breaker frequently trips, have the circuit inspected by a qualified electrician. Never use a larger circuit breaker than stated below, or you will increase the risk of fire.

Circuit Breaker......15 Amp

#### **Plug Type**

The Model G0584 is supplied with a 5-15 plug, similar to **Figure 1**.

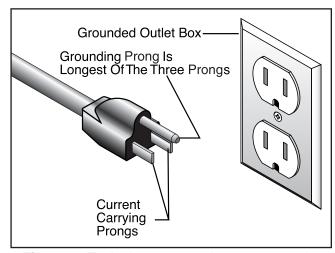
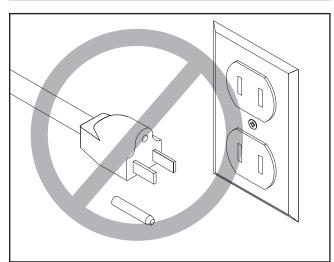


Figure 1. Typical type 5-15 plug & receptacle.



#### **AWARNING**

Electrocution or fire could result if this machine is not grounded correctly or if your electrical configuration does not comply with local and state codes. Ensure compliance by checking with a qualified electrician!



### **A**CAUTION

This machine must have a ground prong in the plug to help ensure that it is grounded. DO NOT remove ground prong from plug to fit into a two-pronged outlet! If the plug will not fit the outlet, have the proper outlet installed by a qualified electrician.

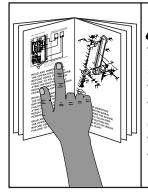
#### **Extension Cords**

- Make sure the cord is rated Standard Service (grade S) or better.
- The extension cord must contain a ground wire and plug pin.
- Use at least a 16 gauge cord. Use a 14 gauge cord if the cord is between 51-100 feet.



### **SECTION 3: SET UP**

#### Set Up Safety



#### AWARNING

This machine presents serious injury hazards to untrained users. Read through this entire manual to become familiar with the controls and operations before starting the machine!



#### WARNING

Wear safety glasses during the entire set up process!



#### AWARNING

The Model G0584 is a heavy machine (300 lbs. shipping weight). DO NOT over-exert yourself while unpacking or moving your machine—get assistance.



### Items Needed for Set Up

The following items are needed to complete the set up process, but are not included with your machine:

#### 



### Unpacking

The Model G0584 was carefully packed when it left our warehouse. If you discover the machine is damaged after you have signed for delivery, please immediately call Customer Service at (570) 546-9663 for advice.

Save the containers and all packing materials for possible inspection by the carrier or its agent. Otherwise, filing a freight claim can be difficult.

When you are completely satisfied with the condition of your shipment, you should inventory the contents.



### **Inventory**

After all the parts have been removed from the two boxes, you should have the following items:

	(1 (Figure 2)	QTY
Α.	Lathe Unit	1
B.	Faceplate 6"	1
C.	Flat Wrenches 32mm	2
D.	Knock Out Tool	1
E.	Hardware Bag (Figure 3)	
	—Handle	1
	—Hex Wrenches 3, 4, 6mm	3
	—Spur Center	1
	—Live Center	
	—Cap Screws M8-1.25 x 35mm	8
	—Lock Washers 8mm	8
Вох	2 (Figure 4)	QTY
F.	Right Stand Leg	1
G.	Left Stand Leg	1

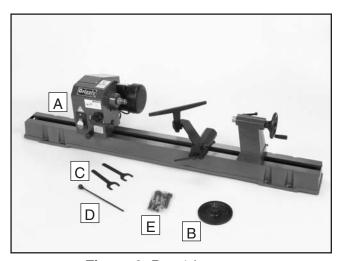


Figure 2. Box 1 inventory.



Figure 3. Hardware bag inventory.

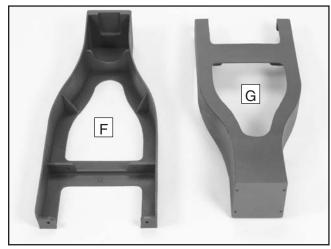
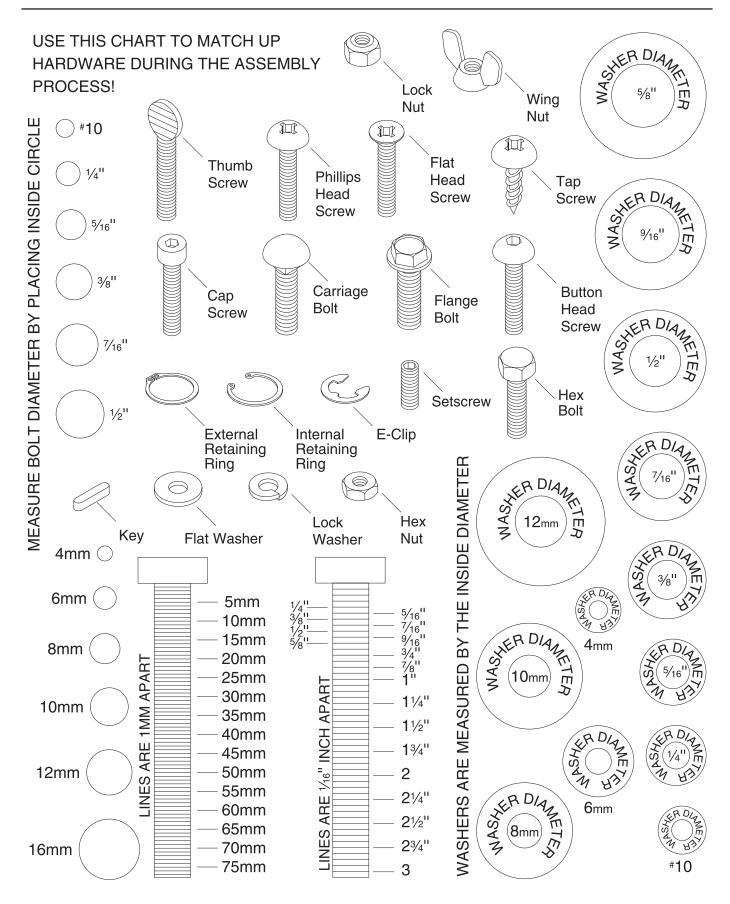


Figure 4. Box 2 inventory.

In the event that any nonproprietary parts are missing (e.g. a nut or a washer), we would be glad to replace them, or for the sake of expediency, replacements can be obtained at your local hardware store.



### **Hardware Recognition Chart**



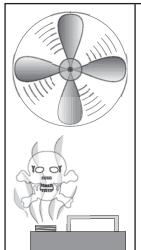
#### Clean Up

The unpainted surfaces are coated with a waxy oil to protect them from corrosion during shipment. Remove this protective coating with a solvent cleaner or citrus-based degreaser such as Grizzly's G7895 Degreaser. To clean thoroughly, some parts may need to be removed. For optimum performance from your machine, make sure you clean all moving parts or sliding contact surfaces that are coated. Avoid chlorine-based solvents, such as acetone or brake parts cleaner, as they may damage painted surfaces should they come in contact. Always follow the manufacturer's instructions when using any type of cleaning product.



#### WARNING

Gasoline and petroleum products have low flash points and could cause an explosion or fire if used to clean machinery. DO NOT use gasoline or petroleum products to clean the machinery.



#### **▲**CAUTION

Many of the solvents commonly used to clean machinery can be toxic when inhaled or ingested. Lack of ventilation while using these solvents could cause serious personal health risks or fire. Take precautions from this hazard by only using cleaning solvents in a well ventilated area.



#### **Site Considerations**

#### Floor Load

The Model G0584 weighs 282 lbs. and has a base footprint of 54" W x 13<sup>3</sup>/<sub>4</sub>" D. Most floors are suitable for your machine; however, some wood floors may require additional reinforcement to support both the machine and operator.

#### **Working Clearances**

Consider existing and anticipated needs, size of material to be processed through each machine, and space for auxiliary stands, work tables or other machinery when establishing a location for your saw. See **Figure 5** for the minimum working clearances of the Model G0584.

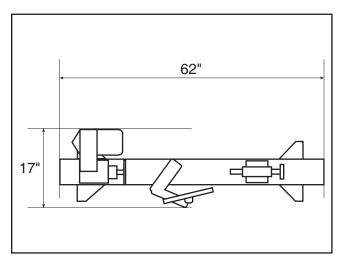
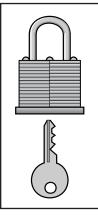


Figure 5. Model G0584 working clearances.



#### **A**CAUTION

Unsupervised children and visitors inside your shop could cause serious personal injury to themselves. Lock all entrances to the shop when you are away and DO NOT allow unsupervised children or visitors in your shop at any time!

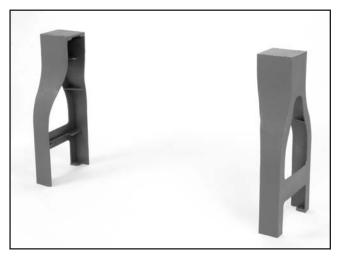


### **Assembly**

Components and Hardware Needed:	
Left and Right Stand Legs  Lathe Unit	
Cap Screws M8-1.25 x 35	
Lock Washers 8mm	
Handle	1
Tools Needed:	QTY
Measuring Tape	1
Strong Assistants for Lifting	2
Hex Wrench 6mm	

#### To mount the lathe to the stand:

1. Stand the right and left legs up approximately 41" apart, and get them reasonably aligned, as shown in **Figure 6**.



**Figure 6.** Stand legs approximately 41" apart to prepare for mounting the lathe.

2. Using the help of your assistants, carefully lift (note, the headstock end is the heaviest and usually requires two people lifting at that end) the lathe onto the stands and align the mounting holes.

**3.** Using the 6mm hex wrench, secure the lathe to the stands with the eight cap screws and lock washers, as shown in **Figure 7**.

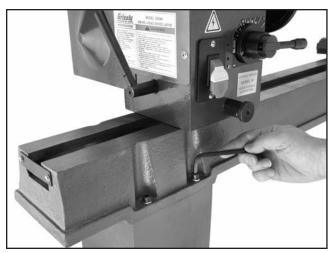


Figure 7. Securing lathe to stand legs.

**4.** Install the handle into the tool rest, as shown in **Figure 8**.

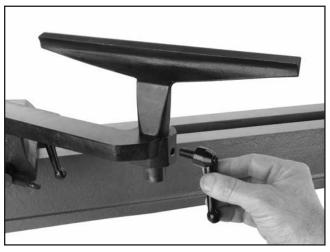


Figure 8. Installing handle into tool rest.



#### **Test Run**

Once the assembly is complete, test run the machine to make sure it runs properly and was not damaged during shipping.

If, during the test run, you cannot easily locate the source of an unusual noise or vibration, stop using the machine immediately, then review the troubleshooting chart on **Page 27**.

If you still cannot remedy a problem, contact our Tech Support at (570) 546-9663 for assistance.



#### WARNING

Wear safety glasses during the entire test run process. Failure to comply may result in serious personal injury.

#### To test run the machine:

- 1. Plug the lathe into the power source.
- Flip the paddle switch up to turn the lathe ON. (Make sure that your hand stays poised over the switch in case you need to quickly turn the machine OFF.)
- **3.** Listen to and watch for abnormal noises or actions. The lathe should run smoothly with little or no vibration or rubbing noises.
  - —Strange or unnatural noises should be investigated and corrected before operating the machine further—always unplug the machine when investigating or correcting any situation with the machine.

**4.** Test the variable speed by pulling out the speed change lever (**Figure 9**) and slowly turning the speed up, then down.

#### **NOTICE**

The lathe must be running to change speeds.



Figure 9. Speed change lever.

- —The machine should speed up and slow down as you move the lever. If this is the case, then the test run is over and your machine is ready for normal operations.
- If the lathe has problems changing speeds, refer to the troubleshooting chart on Page 27, or call our Tech Support at (570) 546-9663 for additional help.



### **SECTION 4: OPERATIONS**

#### **Operation Safety**

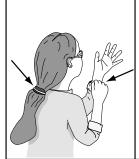
#### **AWARNING**

Damage to your eyes, lungs, and ears could result from using this machine without proper protective gear. Always wear safety glasses, a respirator, and hearing protection when operating this machine.









#### AWARNING

Loose hair and clothing could get caught in machinery and cause serious personal injury. Keep loose clothing and long hair away from moving machinery.

#### **NOTICE**

If you have never used this type of machine or equipment before, WE STRONGLY REC-OMMEND that you read books, trade magazines, or get formal training before beginning any projects. Regardless of the content in this section, Grizzly Industrial will not be held liable for accidents caused by lack of training.



### **Adjusting Headstock**

The Model G0584 headstock can be positioned anywhere along the bed and swiveled up to 180°.

To position the headstock along the length of the bed:

1. Loosen the quick release lever shown in (Figure 10).



Figure 10. Quick release lever.

2. Slide the headstock to the desired position and lock the guick release lever.

Note—The large hex nut under the headstock will require occasional adjusting to assure proper clamping pressure to the bed. Turn the hex nut in small increments to fine tune the clamping pressure, as needed.

#### **ACAUTION**

Never operate the lathe with the quick release lever loose. Serious personal injury may occur.

#### To swivel the headstock:

- 1. Loosen the quick release lever.
- Pull the swivel pin out (see Figure 11) and rotate the headstock clockwise 90° or 180°, as shown in Figure 12.



Figure 11. Swivel pin location.

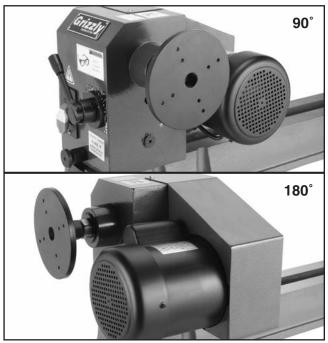


Figure 12. Headstock set at 90° and 180°.

- 3. Release the swivel pin. Make sure the swivel pin has engaged in its detent by trying to rotate the headstock.
- **4.** Tighten the quick release lever.



### **Adjusting Tailstock**

The tailstock is equipped with a cam-action clamping system to secure it to the lathe bed. When the lever is tightened, a locking plate lifts up and secures the tool rest to the bed.

#### To position the tailstock along the bed:

- 1. Loosen the quick release lever and move the tailstock to the desired position (**Figure 13**).
- 2. Re-engage the quick release lever.
- 3. If the quick release lever will not lock the tailstock down onto the bed (either too loose or too tight), loosen or tighten the hex nut (located on the underside of the tailstock) in small increments as needed to achieve the proper clamping pressure.

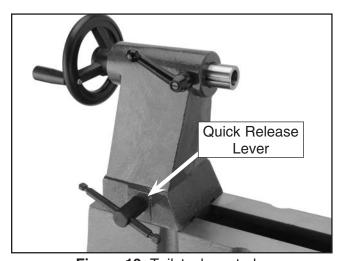


Figure 13. Tailstock controls.



### **Adjusting Tool Rest**

The tool rest is equipped with a cam-action clamping system to secure it to the lathe bed. When the lever is thrown, a locking plate lifts up and secures the tool rest to the bed.

#### To position the tool rest along the bed:

1. Loosen the quick release lever and move the tool rest to the desired position (**Figure 14**).

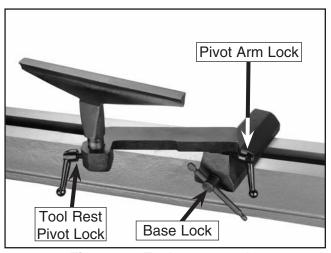


Figure 14. Tool rest controls.

- Re-engage the quick release lever.
  - —If the quick release lever will not lock the tool rest down onto the bed (either too loose or too tight), loosen or tighten the hex nut (located on the underside of the tool rest) in small increments as needed to achieve the proper clamping pressure.



# Installing/Removing Spur Center

The spur center installs into the headstock spindle with a taper fit.

#### To install the centers:

- 1. Unplug the lathe!
- Insert the tapered end of the center into the spindle, and push it in quickly and firmly (see Figure 15).



Figure 15. Inserting spur center into spindle.

3. Check that the center is securely installed by giving it a quick tug. (A properly installed center will not pull out by hand.)

Continued on next page -

#### To remove the centers with the knock-out tool:

#### 1. Unplug the lathe!

- Hold a clean rag under the spindle or wear a glove to catch the center when you remove it
- Using the knock-out tool, tap the center from the outside end of the spindle (as shown in Figure 16) and catch the center as it falls out.



**Figure 16.** Removing spur center using the knock out tool.

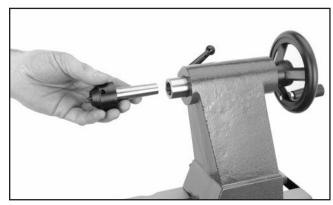


## Installing/Removing Live Center

The live center installs into the tailstock quill with a taper fit.

#### To install the live center:

- 1. Loosen the quill lock (if locked) approximately half a turn.
- 2. Rotate the tailstock handwheel clockwise until the tailstock quill sticks out of the tailstock housing about ½".
- **3.** Insert the live center, as shown in **Figure 17**, and push firmly.



**Figure 17.** Installing live center in tailstock.

4. Align the keyway with the quill lock handle and tighten (Figure 18). Note—This alignment allows the quill to engage with the internal threads and move forward under load. Without this alignment, the quill will just spin and not advance forward under load.

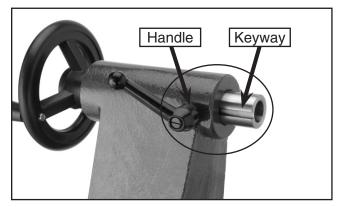


Figure 18. Keyway aligned with handle.

#### To remove the live center:

1. Turn the handwheel counterclockwise until the tailstock quill bottoms out, causing the center to be forced out of the quill.

#### **AWARNING**

The tailstock quill lock handle must always be locked down while the lathe is in use. The workpiece can be thrown from the lathe if this step is not observed. Also, the tailstock quill should not protrude from the tailstock housing more than 2" or the quill will not be supported enough. Failure to follow these warnings may result in personal injury.



# Installing/Removing Faceplate

The faceplate can be installed only if the spur center has been removed from the headstock spindle. Two flat 32mm wrenches are included with the lathe for installing and removing the faceplate.

#### To install the faceplate:

- 1. Unplug the lathe!
- 2. Thread the faceplate onto the headstock spindle.
- 3. Using the two included 32mm flat wrenches, tighten the faceplate as shown in **Figure 19**.

Note—Reverse **Steps 2-3** to remove the faceplate.



Figure 19. Tightening faceplate.

To mount a workpiece to your faceplate, refer to Page 22.



#### Selecting Turning Tools

Lathe tools come in a variety of shapes and sizes and usually fall into five major categories.

 Gouges—Mainly used for rough cutting, detail cutting, and cove profiles. The rough gouge is a hollow, double-ground tool with a round nose, and the detail gouge is a hollow, double-ground tool with either a round or pointed nose. Figure 20 shows an example of a gouge.

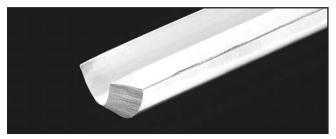


Figure 20. Gouge.

• Skew Chisel—A very versatile tool that can be used for planing, squaring, V-cutting, beading, and parting off. The skew chisel is flat, double-ground with one side higher than the other (usually at an angle of 20-40°). Figure 21 shows an example of a skew chisel.



Figure 21. Skew chisel.

 Scrapers—Mainly used where access for other tools is limited, such as hollowing operations. This is a flat, double-ground tool that comes in a variety of profiles (Round Nose, Spear Point, Square Nose, etc.) to match many different contours. Figure 22 shows an example of a round nose scraper.



Figure 22. Round nose scraper.

Parting Tools—Used for sizing and cutting off work. This is a flat tool with a sharp pointed nose that may be single- or double-ground. Figure 23 shows an example of a parting tool.



Figure 23. Parting tool.

 Specialty Tools—These are the unique, special function tools to aid in hollowing, bowl making, cutting profiles, etc. The Swan Neck Hollowing Tool shown on Page 25 is a good example of a specialty tool.



#### **Spindle Turning**

Spindle turning (**Figure 24**) is the operation performed when a workpiece is mounted between the headstock and the tailstock.

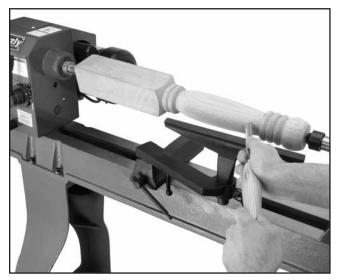
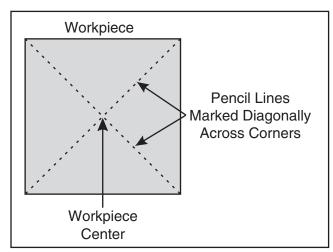


Figure 24. Typical spindle turning operation.

#### To set up a spindle turning operation:

Mark both ends of your workpiece by drawing diagonal lines from corner to corner. The intersection point of these lines will show you the center of your workpiece. See Figure 25 for details.



**Figure 25.** Workpiece marked diagonally from corner to corner to determine the center.

- Using a wood mallet, tap the point of the spur center into the center of the workpiece, so that it leaves a center mark, then remove the spur center.
- 3. Using a ¼" drill bit, drill a ¼" deep hole at the center mark. (Additionally, if the end of your workpiece is square, cut ½" deep saw kerfs across the corners to help embed the spur center.)
- **4.** Cut the corners off your workpiece if it is over 2" x 2" to make turning safer and easier.
- 5. Drive the spur center into the center of the workpiece with a wood mallet to embed it at least 1/4", as shown in **Figure 26**.

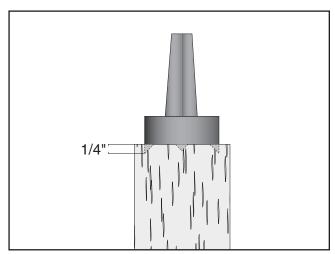
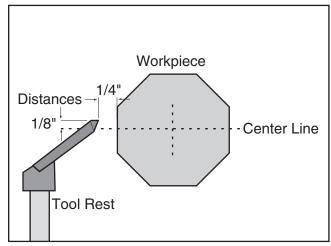


Figure 26. Spur center properly embedded.

- **6.** With the workpiece still attached, insert the spur center into the headstock spindle.
- 7. With the live center installed in the tailstock, slide the tailstock toward the workpiece until the live center touches the workpiece centerpoint, then lock the tailstock in this position.
- **8.** Use the tailstock adjustment knob to push the live center into the workpiece at least a ½".

### **AWARNING**

Do not press the workpiece too firmly with the tailstock or the bearings will bind and overheat. Likewise, do not adjust too loosely or the workpiece will spin off the lathe. Use good judgement. Serious personal injury could result if care is not taken. 9. Position the tool rest approximately ½ away from the workpiece and approximately ½ above the center line, as shown in **Figure 27**.



**Figure 27.** Tool rest set ½" above the center line and ½" away from workpiece.

**10.** Test the setup by hand turning the workpiece to make sure there is enough clearance all the way around before starting.

#### **Spindle Turning Tips:**

- When turning the lathe ON, stand to the side of the spinning direction until the lathe reaches full speed and you can verify that the lathe will not throw the workpiece.
- Use the slowest speed when starting or stopping the lathe, and when rough cutting.
- Select the right speed for the size of workpiece you are turning. Use slower speeds for large workpieces (4" diameter and over); use the middle range speeds for medium sized workpieces (2" to 4" diameter); and use faster speeds for small sized workpieces (under 2" in diameter).
- Keep the turning tool on the tool rest the ENTIRE time that it is in contact with the workpiece.
- Learn the correct techniques for each tool you will use. If you are unsure, read books or magazines about lathe techniques and seek training from experienced users.



#### **Faceplate Turning**

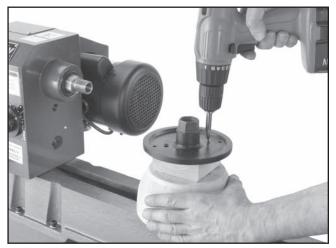
Faceplate turning (**Figure 28**) is when a workpiece is mounted to the faceplate, which is mounted to the headstock spindle. This type of turning is usually done with open-faced workpieces like bowls.



Figure 28. Typical faceplate turning operation.

#### To mount your workpiece to the faceplate:

- 1. Find the center of your workpiece in the same manner as when spindle turning.
- 2. Cut off the corners of the workpiece.
- Center the faceplate on the workpiece and attach it through the faceplate holes with wood screws, as shown in Figure 29.



**Figure 29.** Mounting faceplate to a backing block, which is glued to the workpiece.

**4.** Thread the faceplate onto the headstock spindle and tighten securely.

Note—If screws cannot be placed in the workpiece, then a backing block can be glued to the workpiece and attached to the faceplate with screws.

#### To mount your workpiece to a backing block:

- Make the backing block from a piece of scrap wood that is flat on both sides.
- **2.** Locate and mark the center of both the workpiece and the backing block.
- 3. Drill a 1/4" hole in the center of the backing block.
- 4. Glue the center of the backing block to the center of the workpiece (look through the drilled hole to line up centers), clamp the backing block to the workpiece, and wait for the glue to cure according to the manufacturer's recommendation.



#### **Outboard Turning**

Outboard turning is a variation of faceplate turning and is usually done when stock diameter is greater than 12". For the size of this particular lathe and its minimum turning speed, we recommend a maximum diameter of 17".

**Figure 30** depicts the lathe setup at 90° for turning a bowl using the tool rest extension supplied.



Figure 30. Headstock set at 90°.

**Figure 31** depicts the lathe setup at 180° for turning a bowl. When turning in this manner, you must use a free standing tool rest (not supplied).

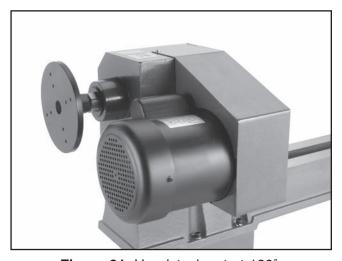


Figure 31. Headstock set at 180°.



### Sanding/Finishing

After turning, the workpiece can be sanded, as shown in **Figure 32**, and finished (in the same manner) before removing it from the lathe.

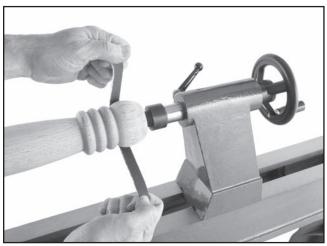
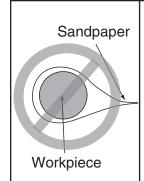


Figure 32. Typical sanding operation.



#### CAUTION

Wrapping the sandpaper completely around the workpiece will pull your hands into the moving workpiece and may cause injury. Never wrap sandpaper completely around the workpiece!

Whenever sanding or finishing, move the tool rest holder out of the way to increase personal safety and gain adequate working room.



### **SECTION 5: ACCESSORIES**

#### G1194—3-Jaw Chuck

A "must have" for the serious wood turner. This 3-jaw chuck is a self-centering style chuck used mostly for round work. All three jaws tighten together at the same time. Jaws are reversible for expanded work holding capacity. Threaded insert required for mounting!



Figure 33. Model G1194 3-Jaw Chuck.

#### G1082—4-Jaw Chuck

Another "must have" for the serious wood turner. This 4-jaw chuck is an independent type chuck that is used for square and odd-shaped pieces. Each jaw tightens individually and can be turned around to hold larger dimension workpieces. Threaded insert required for mounting!



Figure 34. Model G1082 4-Jaw Chuck.

#### G3165—1" x 12 TPI RH Threaded Insert

This threaded insert is required to mount a 3- or 4-jaw chuck to your wood lathe.

H5569—Steady Rest w/Ball Bearing Guides Perfect for stabilizing thin workpieces and eliminating chatter. Turning capacity is ½"-3½".



Figure 35. Model H5569 Steady Rest.

#### H1064—6-PC Deluxe HSS Lathe Chisel Set

This deluxe chisel set features beefy ash handles for unsurpassed control, brass ferrules and high speed steel blades. Includes: a 17" long  $^{13}/_{16}$ " Parting Tool,  $^{13}/_{16}$ " Round Nose and  $^{3}/_{8}$ " Gouge; a 19" long 1" Skew, a  $^{5}/_{8}$ " Gouge and a 22 $^{3}/_{4}$ " long  $^{3}/_{8}$ " Gouge. Comes in a beautiful blow molded carrying case. An extremely popular set!



Figure 36. Model H1064 6-PC Chisel Set.

#### H6542—Robert Sorby HSS 8-PC Turning Set

If quality is king, then start bowing. Made in England, these Robert Sorby lathe tools are especially for the perfectionist wood turner. Includes  $^3\!4$ " roughing gouge,  $^3\!8$ " &  $^1\!/_2$ " spindle gouge,  $^3\!8$ " bowl gouge,  $^3\!4$ " standard skew,  $^3\!/_{16}$ " diamond side cut scraper, 1" square scraper and  $^1\!/_2$ " round scraper. Full size handles are 16"–19".

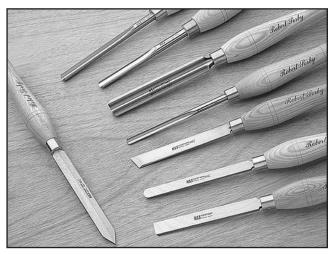


Figure 37. Model H6542 Robert Sorby 8-PC Set.

#### G9863—8-PC HSS Lathe Chisel Set

This chisel set features beautiful 8" ash handles with brass ferrules and  $3\frac{1}{2}$ " long, high speed steel blades. Chisels include:  $\frac{1}{2}$ " parting tool,  $\frac{1}{2}$ " straight chisel,  $\frac{1}{2}$ " double bevel skew,  $\frac{1}{2}$ " roundnose,  $\frac{3}{4}$ " gouge,  $\frac{3}{8}$ " gouge,  $\frac{1}{2}$ " diamond point and  $\frac{3}{8}$ " veiner. Set comes in fitted wooden case, and is very competitively priced!



Figure 38. Model G9863 8-PC Chisel Set.

H6204—Precision Drill Chuck ½2"–5%" x JT#3 G1676—Drill Chuck Arbor MT#2 x JT#3 The best way to bore holes with your lathe!

### H0507—20" Swan Neck Hollowing Tool H0508—24" Swan Neck Hollowing Tool

An excellent choice for blind turning or undercutting where reach is restricted. H0507 is designed for end grain use while H0508 (with a more substantial steel cross section) is designed for both end grain and side grain (bowl) use.

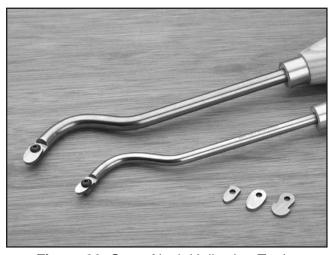


Figure 39. Swan Neck Hollowing Tools.

#### H5954—Robert Sorby Stebcentre MT#2

Razor sharp teeth bite into the workpiece for secure operation and the spring loaded center point controls the amount of drive or slip. This patented feature helps avoid the problem of "digin." Production turners can also load and unload their work while the lathe is still running!

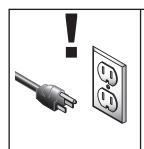


Figure 40. Robert Sorby Stebcentre.

Gall 1-800-523-4777 To Order



### **SECTION 6: SERVICE**



#### **AWARNING**

Always disconnect power to the machine before performing maintenance. Failure to do this may result in serious personal injury.

### **Cleaning/Lubricating**

Cleaning the Model G0584 is relatively easy. Vacuum excess wood chips and sawdust, and wipe off the remaining dust with a dry cloth. If any resin has built up, use a resin dissolving cleaner to remove it. Treat all unpainted cast iron and steel with a non-staining lubricant after cleaning.

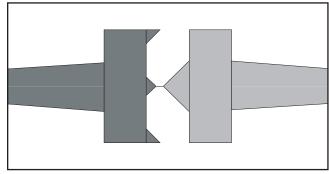
Lubricate the unpainted cast iron surfaces on the bed by wiping the table clean after every use—this ensures moisture from wood dust does not remain on bare metal surfaces. We recommend using products like , G96® Gun Treatment, SLIPIT®, or Boeshield® T-9 for lubricating the unpainted cast iron on your machine.



### Aligning Headstock Spindle to Tailstock

To ensure accurate and safe results, align the headstock spindle to the tailstock center, as described below:

- 1. With the spur center and live center installed, slide the tailstock up to the headstock.
- Loosen the headstock lock and swivel the headstock so the tip of the centers touch, as illustrated in Figure 41, then lock the headstock in place.



**Figure 41.** Center tips touching to ensure alignment.



### **Changing V-Belt**

#### To change the V-belt:

- 1. Unplug the lathe!
- **2.** Remove the V-belt cover.
- 3. Pull the side of the pulley against the spring with one hand and roll the old belt off the edge with the other, as shown in **Figure 42**.
- Install the new belt by reversing the procedure in Step 3.

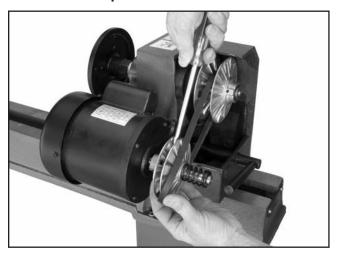


Figure 42. Changing the V-belt.

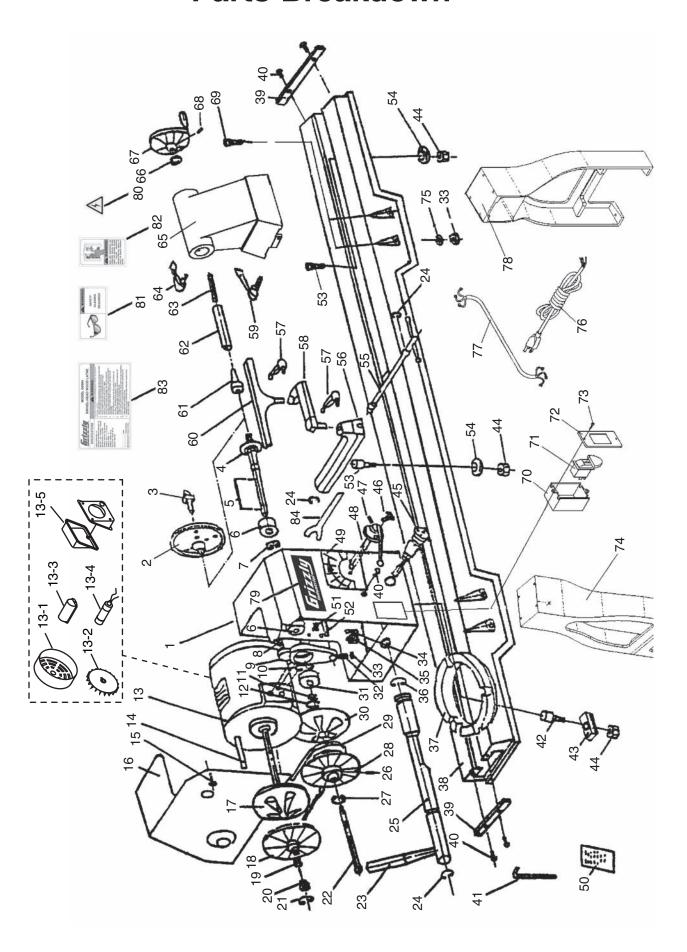


### **Troubleshooting Wood Lathes**

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
Motor will not start, or it growls on start up.	<ol> <li>Power supply fuse or circuit breaker has tripped.</li> <li>Motor fan cover is dented, stopping the fan from being able to spin.</li> <li>Paddle switch is broken or at fault.</li> </ol>	<ol> <li>Disconnect power, and inspect circuit for electrical shorts and repair. Replace circuit breaker if it is old or has tripped many times.</li> <li>Replace or adjust fan cover. Inspect motor fan and replace if damaged.</li> <li>Disconnect power, and use an ohmmeter to check switch terminals for continuity, and replace switch if required.</li> </ol>
	Start capacitor is at fault.     Motor is at fault.	<ul><li>4. Replace start capacitor.</li><li>5. Replace motor.</li></ul>
Fuses or circuit breakers trip open.	Short circuit in line cord or plug.     Short circuit in motor or loose connections.     Incorrect fuses or circuit breakers in power supply.	Inspect cord or plug for damaged insulation and shorted wires and replace extension cord.     Inspect all connections on motor for loose or shorted terminals or worn insulation.     Install correct fuses or circuit breakers.
Vibration noise while machine is running; noise changes when speed is changed.	<ol> <li>V-Belt cover loose.</li> <li>V-Belt cover bent or dented and is making contact with the motor pulley or V-belt.</li> <li>Bad spindle bearing(s).</li> </ol>	<ol> <li>Tighten the four screws that mount the V-belt cover; if necessary, install a soft, vibration dampening material between the V-belt cover and the headstock casting.</li> <li>Remove V-belt cover and inspect the inside for dents, bends, or indications of rubbing. Tap out the dent with a rubber mallet, bend back into proper shape, or shim V-belt cover away from the motor pulley.</li> <li>Replace spindle bearing(s).</li> </ol>
Vibration noise while machine is running; noise remains constant when speed is changed.	<ol> <li>Dented fan cover on motor.</li> <li>Bad spindle bearing(s).</li> </ol>	<ol> <li>Replace or adjust fan cover. Inspect motor fan and replace if damaged.</li> <li>Replace spindle bearing(s).</li> </ol>
Bad surface finish.	Wrong spindle speed.     Dull chisel or wrong chisel being used for the operation.	Use trial-and-error to find a better spindle speed.     Sharpen chisel or try a different chisel.
Inaccurate turning results from one end of the workpiece to the other.	Headstock and tailstock are not properly aligned with each other.	Realign the tailstock to the headstock.
Can't remove tapered tool from tailstock quill.	Tailstock quill has not retracted all the way back into the tailstock.     Debris was not removed from taper before inserting into quill.	Turn the quill handwheel until it forces taper out of quill.     Always make sure that taper surfaces are clean.
Tailstock will not move forward into workpiece when handwheel is turned.	Keyway not aligned with the quill lock handle.	Align the keyway with the quill lock handle as shown in Figure 18, on Page 18 and slightly tighten the handle to engage the keyway.



### **Parts Breakdown**



REF	PART#	DESCRIPTION
1	P0584001	HEADSTOCK
2	P0584002	FACEPLATE 6"
3	P0584003	SPUR CENTER MT#2
4	P0584004	SPINDLE 1"-12 TPI RH
5	PK93M	KEY 4 X 4 X 80
6	P6205	BALL BEARING 6205
7	PR11M	EXT RETAINING RING 25MM
8	P0584008	COMPRESSION SPRING
9	P0584009	SHIFTING LEVER BRACKET
10	PR06M	EXT RETAINING RING 16MM
11	PR11M	EXT RETAINING RING 25MM
12	PR15M	EXT RETAINING RING 30MM
13	P0584013	MOTOR 1/2HP, 110V, 1725
13-1	P0584013-1	FAN COVER
13-2	P0584013-2	FAN
13-3	P0584013-3	CAPACITOR COVER
13-4	PC200B	CAP. 200M 125V 3.25" X 1.25"
13-5	P0584013-5	JUNCTION BOX
14	PK93M	KEY 4 X 4 X 80
15	PS05M	PHLP HD SCR M58 X 8
16	P0584016	MOTOR COVER
17	P0584017	MOTOR PULLEY(RIGHT)
18	P0584018	MOTOR PULLEY(LEFT)
19	P0584019	COMPRESSION SPRING
20	P0584020	SLEEVE
21	PR06M	EXT RETAINING RING 16MM
22	P0584022	PUSH-OUT ROD
23	P0584023	QUICK RELEASE HANDLE
24	PR08M	EXT RETAINING RING 19MM
25	P0584025	ECCENTRIC ROD
26	P0584026	HOLO KNURL SET SCR M6 X 10
27	PR58M	EXT RETAINING RING 24MM
28	P0584028	SPINDLE PULLEY(LEFT)
29	PVM24	V-BELT M-24 3L240
30	P0584030	SPINDLE PULLEY(RIGHT)
31	P6206	BALL BEARING 6206
32	PSS09M	SET SCREW M8-1.25 X 20
33	PN03M	HEX NUT M8-1.25
34	P0584034	TWO WIRE CLAMP
35	PN04M	HEX NUT M47
36	PR10M	EXT RETAINING RING 22MM
37	P0584037	TURNING BASE
38	P0584038	BED
39	P0584039	BAFFLE
		<del>-</del>
40	PS09M	PHLP HD SCR M58 X 10

41         PAW06M         HEX WRENCH 6MM           42         P0584042         BED CLAMP BOLT-A           43         P0584043         BED CLAMP-A           44         PN15M         HEX NUT M18-1.5           45         P0584045         SWIVEL PIN ASSEMBLY           46         PS08M         PHLP HD SCR M58 X 12           47         PSS14M         SET SCREW M8-1.25 X 12           48         P0584048         GEAR ASSEMBLY	
43         P0584043         BED CLAMP-A           44         PN15M         HEX NUT M18-1.5           45         P0584045         SWIVEL PIN ASSEMBLY           46         PS08M         PHLP HD SCR M58 X 12           47         PSS14M         SET SCREW M8-1.25 X 12	
44         PN15M         HEX NUT M18-1.5           45         P0584045         SWIVEL PIN ASSEMBLY           46         PS08M         PHLP HD SCR M58 X 12           47         PSS14M         SET SCREW M8-1.25 X 12	
45         P0584045         SWIVEL PIN ASSEMBLY           46         PS08M         PHLP HD SCR M58 X 12           47         PSS14M         SET SCREW M8-1.25 X 12	
46         PS08M         PHLP HD SCR M58 X 12           47         PSS14M         SET SCREW M8-1.25 X 12	
47 PSS14M SET SCREW M8-1.25 X 12	2
	2
48 P0584048 GEAR ASSEMBLY	
I OOTOTO   OLAN AOOLINDLI	
49 P0584049 SPEED LABEL	
50 P0584050 SPEED INSTRUCTION LAI	BEL
51 PB26M HEX BOLT M8-1.25 X 30	
52 PLW04M LOCK WASHER 8MM	
53 P0584053 BED CLAMP BOLT-B	
54 P0584054 BED CLAMP-B	
55 P0584055 ECCENTRIC ROD	
56 P0584056 TOOL REST BODY	
57 P0584057 HANDLE ASSY M10-1.5 X	15
58 P0584058 EXTENSION TOOL REST	
59 P0584059 TAILSTOCK LOCK HANDL	E
60 P0584060 TOOL REST	
61 P0584061 TAILSTOCK LIVE CENTER	MT#2
62 P0584062 TAILSTOCK QUILL	
63 P0584063 TAILSTOCK LEADSCREW	1
64 P0584064 HANDLE ASSY M10-1.5 X	20
65 P0584065 TAILSTOCK	
66 PW14M FLAT WASHER 15MM	
67 P0584067 HANDWHEEL	
68 P0584068 CONE SET SCREW M8-1.2	25 X 10
69 PSB40M CAP SCREW M8-1.25 X 35	5
70 P0584070 SWITCH BOX	
71 PSW06 PADDLE SWITCH W/KEY	
71-1 PSW09-1 REPLACEMENT SWITCH I	KEY
72 P0584072 SWITCH BOX PLATE	
73 PS07M PHLP HD SCR M47 X 8	
74 P0584074 STAND LEG (LEFT)	
75 PLW04M LOCK WASHER 8MM	
76 PWRCRD110L POWER CORD 110V, W/P	LUG
77 PWRCRD110S POWER CORD 110V, SHC	RT
78 P0584078 STAND LEG (RIGHT)	
79 P0584079 GRIZZLY LOGO LABEL	
80 PLABEL-14 ELECTRICITY WARNING I	LABEL
81 P0584081 SAFETY GLASSES LABEL	-HORZ
82 PLABEL-12 READ MANUAL LABEL	
83 P0584083 G0584 MACHINE ID LABEI	L
84 P0584084 FLAT WRENCH 32MM	

### **WARRANTY AND RETURNS**

Grizzly Industrial, Inc. warrants every product it sells for a period of **1 year** to the original purchaser from the date of purchase. This warranty does not apply to defects due directly or indirectly to misuse, abuse, negligence, accidents, repairs or alterations or lack of maintenance. This is Grizzly's sole written warranty and any and all warranties that may be implied by law, including any merchantability or fitness, for any particular purpose, are hereby limited to the duration of this written warranty. We do not warrant or represent that the merchandise complies with the provisions of any law or acts unless the manufacturer so warrants. In no event shall Grizzly's liability under this warranty exceed the purchase price paid for the product and any legal actions brought against Grizzly shall be tried in the State of Washington, County of Whatcom.

We shall in no event be liable for death, injuries to persons or property or for incidental, contingent, special, or consequential damages arising from the use of our products.

To take advantage of this warranty, contact us by mail or phone and give us all the details. We will then issue you a "Return Number," which must be clearly posted on the outside as well as the inside of the carton. We will not accept any item back without this number. Proof of purchase must accompany the merchandise.

The manufacturers reserve the right to change specifications at any time because they constantly strive to achieve better quality equipment. We make every effort to ensure that our products meet high quality and durability standards and we hope you never need to use this warranty.

Please feel free to write or call us if you have any questions about the machine or the manual.

Thank you again for your business and continued support. We hope to serve you again soon.

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